

REMARKS

The above amendment is made in response to the final Office Action of February 1, 2011. Claims 11–25 are pending in the present application. Claims 11, 14, 17, and 18 have been amended to highlight certain novel features of the invention and to further prosecution. Certain features from claim 14 have been incorporated in to claims 11 and 18. Further support for the amendments to claims 11 and 18 can be found in line 29 page 4 and lines 3-5 of page 5 of the specification which reads, in part, that “Ad Center...can be an independent personalized and localized Ad service provider with interfaces to these TV and / or content service providers.” No new matter has been added.

OBJECTION UNDER 35 U.S.C. 112:

Claims 17 is objected to for the following informality: Claim 17, lines 2-3, the limitation, “configured to to collect,” is incorrect. Claim 17 has been amended to remove one “to” thereby overcoming the informality objection.

REJECTIONS UNDER 35 U.S.C. 103:

Claims 11, 14-16, 18-23, and 25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Thukral*, in view of *Eyer et al.*, in view of *Blasko et al.*, in view of *Sgaraglino*, in view of *Drake*, in view of *Gordon*, in view of *Agmoni*.

Claims 12, 13, and 24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Thukral*, in view of *Eyer et al.*, in view of *Blasko et al.*, in view of *Sgaraglino*, in view of *Drake*, in view of *Gordon*, in view of *Agmoni*, further in view of *Ogawa et al.*

Claim 17 stands rejected under 35 U.S.C. 103(a) as being unpatentable over *Thukral*, in view of *Eyer et al.*, in view of *Blasko et al.*, in view of *Sgaraglino*, in view of *Drake*, in view of *Swix et al.*, in view of *Zigmond et al.*, in view of *deAndrade et al.*, in view of *Rodriguez et al.*

Before turning in substance to the rejections, it should be noted that the disclosed Ad Center and Intelligent Control Module (ICM)'s composition, constructs, input and output, target user and usage patterns, and the methods for determining personalized and localized advertisement are significantly different from the prior art. Furthermore, it is not obvious to a person of ordinary skill in the art to conceive of a system and method for personalized and localized TV ad delivery as disclosed in the claims. Applicants respectfully request reconsideration of the above amended claims in light of the following comments.

Regarding the first rejection of claims 11, 14-16, 18-23 and 25, it should be noted that certain features of claim 14 have been incorporated in to claims 11 and 18. More particularly, independent claims 11 and 18 currently recite that said Ad Center is independent from the service providers and includes one interface for each service provider. This is uniquely different from the combination of the systems disclosed by *Thukral*, in view of *Eyer et al.* In contrast, the system of *Thukral* does not have an independent Ad Center and connects to the adviser directly (see Fig. 1); and the Ad Center disclosed by *Eyer et al.* is part of the service provider (see Fig. 2), with the television service provider creating customized and directed advertising to that user (*see*, paragraph 0008).

The difference is significant and is part of the uniqueness of the amended claims, since it is the independent Ad Center with the claimed detailed components (*see*, claim 12) which would enable the delivery of personalized and localized TV ads. This is also non-obvious over the systems disclosed by *Thukral* and *Eyer et al.*, as a person with ordinary skill in the art would not conceive of an independent Ad Center outside of an advisor or a television service provider. This represents “out-of-the-box” thinking and a paradigm shift, since an Ad Center for television advertisement is usually with an advertiser or television service provider at the time of invention.

Aside from an independent Ad Center, the six components of the Ad Center (*see*, claim 12) are also uniquely different from the ad server of *Eyer et al.* (*see*, FIG. 2) because the ad server disclosed by *Eyer et al.* has only one ad database with some target information (*see*, paragraph 0015). The Ad Center of *Eyer et al.* also does not store target information (*see*, claim 12), which is determined by the Intelligent Control Module (ICM) as part of the ad schedules (*see*, claim 17) for proper ad display by the ad control unit to display the proper advertisement (*see*, claim 17). The decision-making unit inside the Ad Center does not determine which ad to present to target viewers or target information, whereas the target information disclosed by *Eyer et al.* (*see*, paragraph [0015]) determines the ad target. It is not obvious to a person skilled in the art to modify the system of Thukral with the teaching of the ad server of *Eyer et al.* to produce the Ad Center as claimed, since the disclosed Ad Center has six unique components and does determine an ad’s target viewers or target information.

Regarding each ICM being configured to determine user-personalized and localized ad schedules pertaining to channels and time and location attributes that *Thukral*, *Eyer et*

al., *Sgaraglino*, and *Drake* does not disclose, Applicants respectfully disagree that the new ground cited in the final Office Action, as disclosed by *Gordon* (*see*, paragraph 0023) and *Agmoni* (*see*, paragraphs 0017-0019), that they cover what is not disclosed by *Thukral*, in view of *Eyer et al.*, in view of *Sgaraglino*, in view of *Drake*.

The ad schedule determination disclosed by *Gordon* (*see*, paragraph 0023) does not have location-specific attributes for its ad schedule insertion. The location attributes disclosed by *Agmoni* (*see*, paragraphs 0017-0019) are for dial access numbers, which are limited to telephone area codes, whereas the location attributes are a rich set of user localization information and demographics that are localized to user's needs, including but not limited to, demographic data, household information, location properties, street blocks, and local stores, etc. (*see*, claim 13 and paragraphs 0005, 0016 and 0017).

In addition to the uniqueness and non-obviousness in the disclosed Ad Center (*see*, claims 11, 12 and 14) and the personalized and localized ad schedule determination (*see*, claim 18) over *Thukral*, *Eyer et al.*, *Sgaraglino*, *Drake*, *Gordon*, and *Agmoni*, the analysis or decision support unit in ICM (*see*, claim 17) and the decision-making unit in Ad Center (*see*, claim 12) are uniquely different from the ones disclosed by *Blasko* (*see*, paragraphs 0016, 0028-0031, 0039, 0044, and 0051).

Firstly, the execution mode of the disclosed decision-support and decision-making capabilities is uniquely different from the ad agency and advertiser analysis components disclosed by *Blasko et al.* The decision-support and decision-making capabilities disclosed in the present patent application (*see*, claims 12 and 18) executes in the background in real-time and without user interactions, whereas the ad agency and advertiser analysis components disclosed by *Blasko et al.* are for interactive analysis by the advertisers (*see*,

paragraphs 0016, 0028-0031, 0039, 0044, and 0051) and need to be executed by the advertisers. Secondly, the target users of the two disclosed analysis tools are different. The one disclosed in the present patent application is used for determining personalized and localized ads to be inserted into the ad schedule inside an ICM (*see*, claim 23), whereas the one disclosed by *Blasko et al.* is used by human advertisers interactively for advertising opportunities within the network (*see*, paragraph 0016). This difference is very important because direct user interactions with the analysis component as disclosed by *Blasko et al.* will not yield realistic personalized and localized TV advertising to individual viewers, which at the peak may need to support millions of viewers and tens of millions of ads in a given day. Only with a non-interactive ad analysis, such as the decision-support units inside the ICM or Ad Center, is it practical to support millions of users' personalized and localized ad needs. These unique differences are also non-obvious and may be very difficult for a person with ordinary skill in the art to conceive of by the teaching of *Blasko et al.*

The user ad search and follow-up request components (*see*, claim 19) are also uniquely different from the user ad search and follow-up requests disclosed by *Sgaraglino*. The user ad search and follow-up requests as disclosed in claims 19, 20, 21 and 22 of the present patent application are not disclosed by *Sgaraglino*.

Finally, the Office Action cites Eyer, and Fig. 2 and paragraph 15, to show the feature of ad center interfaces as links 24, 26 and 38. Claims 11 and 18 currently recite that the Ad Center is independent from the service providers. Eyer clearly shows Service Provider 20 which includes Ad Server 46, Ad Database 48 and User Profile 34. The link 24 in Eyer is described as a transmission medium which supplies television program

channels to a viewer's set-top box (STB) 22. Thus, Eyer's link 24 is connected between the Service Provider 20 and the user's Set-Top Box 22 and delivers all program channels. Accordingly, link 24 does not provide an interface between the Ad Center and the service providers, and even if it did, there is only one link 24 for all channels, whereas claims 11 and 18 recite one interface for each service provider.

Eyer's link 26 supplies advertisements from Ad Database 48 within Service Provider 20 to the Set-Top Box 22. Link 38 transmits viewer's profile information from the User Profile 36 in Set-Top Box 22 to the User Profile 34 within Service Provider 20. Thus these links 26 and 38 are used for Ad's and user profiles, and do not relate to an interface between the Ad Center and the Service Providers, as claimed. As mentioned, above, Eyer's does not show or suggest one interface for each service provider as illustrated as the series of vertical lines in Applicant's FIG. 1. More particularly, FIG. 1 shows a first interface line between Ad Center 1 and Terrestrial TV (first service provider), a second interface line between Ad Center 1 and Cable TV (second service provider), a third interface line between Ad Center 1 and Internet/IP TV (third service provider), and a fourth interface line between Ad Center 1 and Satellite TV (fourth service provider).

When comparing Eyer to claims 11 and 18, Eyer has the Ad Server/Ad Database incorporated within Service Provider 20 rather than the claimed Ad Center being independent from the service providers; Eyer has links between the combined Service Provider 20/Ad Server 46 module and the Set-Top Box 22 rather than between the claimed Ad Center and the service providers; and Eyer provides one link 24 for all media/service providers rather than the claimed one interface for each service provider.

Regarding claims 17 and 25, the following states the uniqueness and non-obviousness of the disclosed ICM over *Thukral*, in view of *Eyer et al.*, in view of *Blasko et al.*, in view of *Sgaraglino*, in view of *Drake*, in view of *Swix et al.*, in view of *Zigmond et al.*, in view of *deAndrade et al.* in view of *Rodriguez et al.*

Thukral, in view of *Eyer et al.*, in view of *Blasko et al.*, in view of *Sgaraglino*, does not explicitly disclose what the ICM further comprises. Additionally, Applicants would like to summarize the differences between the disclosed system and the prior art in that the Ad Center disclosed by *Eyer et al.* is very different from the claimed Ad Center and does not have a comparable ICM. The analysis component of *Blasko et al.* is different from the decision-support or decision-making units; *Sgaraglino*'s user ad search and follow up requests are different from the non-user interactive nature of the ad follow-up.

With regard to the decision-support unit disclosed by *Swix et al.*, the processor disclosed by *Swix et al.* (*see*, FIG. 3, processor 301c, column 4, lines 24-26; and column 5, lines 1-16) has several differences from the claimed ICM ad decision-support unit (*see*, claims 17 and 19-25).

Firstly, the decision-support unit of claim 17 outputs ad schedules pertaining to channels and time, whereas the processor disclosed by *Swix et al.* is used for data collection (*see*, FIG. 4, step 410; lines 24-26, and column 5, lines 3-5), for the ad insertion device (*see*, FIG. 3, item 301d), and to insert ad content into the broadcast content (*see*, FIG. 4, step 422). The difference is significant and important because the claimed decision-support unit performs data collection for the user information unit (*see*, claim 17), which also entails data collection from ad preference set up (*see*, claim 17). Additionally and more importantly, the output ad schedule in the claimed invention is independent of the ad

insertion process disclosed by *Swix et al.* (*see*, FIG. 4). Ad schedule generation in the claimed invention can be event-triggered (*see*, claim 17) or preprogrammed. The significance of separating personalized and localized ad schedule generation from ad insertion greatly reduces the potential performance and execution risks in reduction to practice because the data collection and decision-making processes can be performance intensive. If the decision-making and data collection processes are part of the ad insertion process, as disclosed by *Swix et al.* (*see*, FIG. 4), it may potentially cause performance issues for real time ad insertion, since there can potentially be millions of users and user attributes, thousands of items of applicable ad content, and hundreds of localization attributes for the decision support unit to act on. The separation of ad schedule generation from ad insertion can significantly improve ad insertion performance, which is executed by the ad control unit of the ICM (*see*, claim 17), since the ad control unit inside the ICM just needs to perform a simple look-up of the ad schedule, while the ad schedule can be generated independently of the claimed ad insertion process and, thus, more effectively leverage ICM computing power.

Secondly, the decision support unit of claim 17 also interacts and makes decisions based on user preference set up and can be triggered based on events like ad user information insertion, change, or deletion (*see*, claim 25), which are not disclosed by *Swix et al.*

Thirdly, the claimed decision-support unit also determines personalized and localized ads based on a variety of methods, as described in claims 19-25, which include ad follow-up and search inside the ICM (*see*, claim 19), inside the Ad Center (*see*, claim 20), via the Internet through the Ad Center (*see*, claim 21) or through the ICM directly (*see*,

claim 22). The methods also include event-based triggering of the decision-support mechanism within the ICM or Ad Center (*see*, claims 23 and 24) and keeping synchronization between the ICM and the Ad Center with respect to the data required for decision support (*see*, claim 25). These methods taken together are integral components of the claimed invention, and the collective use of these methods forms a flexible and robust ad decision-support and follow-up process for users interacting with the ICM. In contrast, the methods disclosed by *Swix et al.* only focus on a step-by-step ad insertion process, with no mention of the methods of claims 19-25 of the present invention.

These three unique and significant differences are not obvious and probably very difficult for a person of ordinary skill in the art to conceive of by the teaching of *Swix et al.*, in view of *Thukral*, in view of *Eyer et al.*, in view of *Blasko et al.*, in view of *Sgaraglino*.

With regard to the event-triggering mechanism disclosed by *Zigmond et al.* that can be added directly to *Thukral*, in view of *Eyer et al.*, in view of *Blasko et al.*, in view of *Sgaraglino*, in view of *Drake*, in view of *Swix et al.*, that might be similar to the claimed event-triggering mechanism of claim 17, Applicants respectfully disagree because the two mechanisms are uniquely different. The event-triggering mechanism disclosed by *Zigmond et al.* is trigger-based on an event like a signal carried in the video programming feed or is based on an external mechanism, such as information contained in an electronic program guide, for display of video programming feed (*see*, column 1, lines 35-36). In contrast, the event-triggering mechanism of the present invention set forth in claim 17 is based on deletion, addition, or change of event based on ad user information or attributes (*see*, claim 25) for determination if the decision-support engine needs to be re-run to keep the ad schedule information up to date. This difference is very important because the events and

event-triggering mechanism disclosed by *Zigmond et al.* are not usable or relevant to ad schedule generation pertaining to a user's channels or time. It is not obvious and rather difficult for a person of ordinary skill in the art to conceive of the exact event-triggering mechanism (*see*, claims 17 and 25), since what is disclosed by *Zigmond et al.* is not only uniquely different but also one of the millions of possible triggering mechanisms that can be conceived of, whereas the claimed event-triggering mechanism pertains only to the system and method of the present invention for personalized and localized T.V. ad delivery.

With regard to *deAndrade et al.*, this reference discloses a system wherein expert business rules and mathematical and statistical models are established based upon user and ad attribute information. Therefore, Applicants respectfully disagree that it is obvious to one of ordinary skill in the art to combine the teaching of the business rules disclosed by *deAndrade et al.* with the system of *Thukral* to arrive at the claimed decision support unit disclosed in claim 17 of the present invention.

Firstly, business rules and mathematical and statistical models are complex subjects that have many algorithms, tens of thousands of research papers and require extensive research to find the proper business rule mechanisms and models to apply. Just like the stochastic model in statistics or mathematics, which is used differently by different financial institutions on Wall Street (with people having Ph.D. degrees in math or statistics applying the model differently based on different financial factors), in math or statistics there are hundreds, if not thousands, of models or theories just like the stochastic model. Each model may have hundreds or thousands or business uses.

Secondly, with respect to business rules, for example, business rule mechanisms are part of the realm artificial intelligence (AI) that can be supported by expert systems, neural networks, fuzzy logic, generic algorithms, constraint-based systems, and many other AI mechanisms. Each mechanism in business rules already has thousands of Ph.D.- and Masters-level research papers written about them in addition to the tens of millions of business rule systems implemented as IT (information technology) systems across millions of companies in the world because each company has its own business rules. With respect to business rules, mathematical models, and statistical models in the claimed ICM (*see*, claim 17), the present invention claims that the ICM will leverage existing technologies in business rules, mathematical and statistical models, which may have tens of millions of options or variations to be considered or implemented in reduction to practice, without the claimed system limiting itself to one or two business rule mechanisms.

Thirdly, business rules and mathematical models are implemented by every company in the world, since each company has its own business rules or mathematical models. There is always uniqueness among the tens of millions of companies in implementing their own business rules. To state that Company A and Company B are implementing business rules does not mean that both companies are implementing the same thing.

Lastly, the business rules disclosed by *Zigmond et al.* (*see*, paragraphs 0055-0120), which are a mix of business rules represented in XML, schema definitions in XSD (*see*, paragraph 0053), business requirements, and system components, etc., are unique to the business context of *Zigmond et al.* Furthermore, there may be millions of variations or differences to the business rules and system disclosed by *Zigmond et al.*

With regard to the ad follow-up and ad search unit disclosed by *Sgaraglino*, as argued in Applicants response concerning claims 11-16 and 18-24, there are significant differences between the system of *Sgaraglino* and the ad follow-up and search unit and mechanisms of the present invention as set forth in claims 11, 17, 19, 20, 21, and 22.

In conclusion, because of the significant differences and unique improvements of the claimed system and method of *Thukral*, in view of *Eyer et al.*, in view of *Blasko et al.*, in view of *Sgaraglino*, in view of *Drake*, in view of *Swix et al.*, in view of *Zigmond et al.*, in view of *deAndrade et al.*, in view of *Rodriguez et al.*, in view of *Gordon*, in view of *Agmoni*, individually, as stated above, and because it is also not be obvious to one of ordinary skill in the art to conceive of a similar system and method, Applicants respectfully ask that the stated significant differences, non-obviousness, and improvement of the claimed system and method over the prior art be considered.

CONCLUSION

For the foregoing reasons, it is respectfully submitted that Claims 11-25 are patentable and non-obvious over the cited references. Applicants respectfully request reconsideration of the rejection and allowance of the application. Such early and favorable action is earnestly solicited.

Paragraphs 2 and 3 of the Office Action discussed the feature of “the Ad Center being an independent unit operated outside a service provider with interfaces to the service providers.” Since the Examiner has already considered this feature and its effect under the *In re Van Geuns* decision, the inclusion of that feature into claims 11 and 18 is believed appropriate after final.

It is believed that no additional fees are required. However, if additional fees are required, the Commissioner is hereby authorized to charge any fee deficiencies, or credit any overpayments, without specific authorization, to Deposit Account No. 50-5335.

Respectfully submitted,

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